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New Jersey Garden Clubs Help Protect New Jersey Holly

Conservation of the beautiful native plants of our State is one of the chief objectives of the Garden Clubs of New Jersey. By them much excellent educational work has been done. An important phase of this is directing attention to numerous beautiful plants which may be used for Christmas decoration in place of Holly, that Queen of our native evergreens. This letter calls attention to another way to aid conservation which offers opportunity for wider enjoyment as well as the protection of lovely Holly. Inspired by the experiments of Dr. P. W. Zimmerman, of the Boyce-Thompson Institute, I have for several years directed the skill gained in the development of blueberries to rooting cuttings from Holly trees of outstanding merit, and for the first time have a small stock of plants to share with other New Jersey gardeners.

My hope is to extend nursery propagation to a number of beautiful native plants threatened with extinction so that without damage to wild stock they may be intimately enjoyed by garden lovers.

In addition to propagating Holly from cuttings some tentative work has been done with Arbutus from seeds and cuttings, with Swamp Magnolia and Pine Barren Gentian from seed, with Ink Berry, Climbing Fern and a few others. Such preliminary work is expensive and tedious and my hope of aiding conservation in this way can be achieved only with the support of those who may purchase these rare and beautiful plants.

Besides a few hundred Holly plants I offer at this time a small number of plants of Magnolia and of Pine Barren Gentian. May their growth in other gardens give joy equal to that experienced in guiding and guarding their first steps in mine!

Elizabeth C. White.

Joseph J. White, Inc., Whitesbog, N. J.

Holly

(*Ilex opaca*)

Holly trees are like our orchard fruits in that individual seedlings vary widely in the character of leaves, fruit and type of growth. Some have leaves of dark glossy green, while others have leaves with a yellowish cast or a disagreeable tendency to spot. Some have flat leaves, others bear leaves that are frilly. Some are furnished with long slender leaves and others with leaves that are short and broad. The leaves of some trees have many spines and on others the older branches may carry leaves that are almost spineless. Some trees bear berries of a deep orange color, though on most they are of various shades of crimson. Some trees have round berries, on others they are oval. Some pistillate trees bear regularly abundant crops of berries, while the crops of others are scant and irregular. All this in addition to the fact that Holly is dioecious, which means that about half the number of seedling trees are staminate and produce no berries at all.

The Holly plants here offered were grown from cuttings from trees growing on and in the vicinity of the farm where the writer has had her home for more than fifty years. Many of these trees are to her like personal friends, loved for their beauty of foliage and faithfulness in producing bountiful crops of cheery red berries.

Many have been the attempts to move wild Holly trees to gardens. When tiny trees are dug with plenty of soil this sometimes succeeds. It is safe to say, however, that more than ninety per cent of moved wild Holly trees die and at least half of the few that survive transplanting never bear berries, for the sex is seldom known when the plant is moved. Seedling Holly trees, which of course includes all wild plants, do not produce flowers or berries until far past the size when moving is comparatively easy. Trees from cuttings, however, bear berries when very small.

The sex of a Holly tree can easily be determined when it is in flower even without examination of the reproductive organs. The flowers of the berry bearing or pistillate trees are carried singly on the stem, while those of the staminate trees are in small clusters of from three to five.

Our experience indicates that it may not be necessary for ornamental purposes to have staminate trees associated with the pistillate. Little plants in our greenhouse flowering weeks ahead of outdoor Holly, and with no staminate plants in the house, set berries which matured

to red beauty even though the seeds may not have been viable. Several of the regularly producing trees from which these cuttings were taken are growing in solitary state at least a quarter of a mile from any other Holly tree. In spite of this evidence it may be safer to plant both sexes, and we have a small proportion of staminate plants grown from trees with exceptionally beautiful foliage.

Ernest H. Wilson in his "Aristocrats of the Trees", says, "Hollies resent injury to their bark more than any other tree.—Once established they are not particular as to the soil, provided they get a proper supply of water at the roots". This resentment of injury extends also to the roots. Those of the cuttings are as brittle as glass and require exceedingly careful handling. It is this resentment of mechanical injury which makes Holly so difficult to move.

Holly is found most abundantly in moist, partially shaded situations. It seems probable that this is because it is easier for tiny seedlings to survive in such locations for many of the large trees from which our cuttings were taken are standing on high, dry ground exposed to full sun and wind.

I have frequently known small Holly trees with well established root systems to push a leader up two to three feet in a season so it seems that Holly's reputation of being a slow growing plant is not altogether deserved. It does, however, require time for these slender switches to become the full branched specimens desired. During the first two or three years little trees from cuttings are apt to grow in rather a sprawly fashion and later, when the roots are well established, to start a leader heavenward with a rush.

Holly responds to pruning as gratefully as any other fruit tree. It may be sheared to a definite form or trained so that each branch is a thing of beauty. A tree that is reasonably cut to provide sprays for indoor decoration at Christmas time, produces the next season foliage more beautiful and berries more handsome than when left unpruned. This makes it a still greater pity that so many beautiful trees have been butchered to such an extent as to cause their death, and it also offers delightful possibilities to the gardener with Holly trees of her own.

Holly trees may be planted with confidence in any average garden. It would seem wiser, however, to lighten clay soils with sand and peat moss, and so far as possible to select loca-

tions where the trees will be somewhat protected from full sun and wind.

The plants offered are out of three-inch pots just boiling over with lusty roots. The tops are six to ten inches high.

These plants may be set outdoors as soon as received, kept dormant by cold and planted in

the spring, or allowed to grow at room temperature during the winter and set in permanent quarters in the spring when danger of damage by frost to the tender new growth is past.

What an appropriate Christmas gift for a gardening friend!

\$1.00 each delivered :: \$9.00 per ten delivered

Swamp Magnolia

(*Magnolia glauca*)

In May the flowers of our native Magnolia spread their waxy, creamy white petals to two or three inches in diameter and fill the air with delightful fragrance. Every one within reach of their balmy breath is tempted to carry away all of the lovely flowers that can be reached. Street peddlers gather the buds a few days before ready to open, force the petals back abnormally, and sell the resulting fragrant monstrosities in nearby cities. So it happens that the Magnolia trees near our highways are usually broken and distorted. The flowers, when left to mature, are succeeded by cone-like seed vessels which early in September turn crimson, crack open and push out shining, scarlet seeds which dangle most fascinatingly on white threads. These crimson cones, with their scarlet seeds, are more strikingly ornamental even than the flowers.

It is the foliage, however, which, above everything else, makes these native Magnolias highly desirable plants for our gardens. I know nothing else in the plant world with just the same color and quality of foliage. The leaves, of a firm leathery texture, are oval from one and a half to two inches wide and three to six inches long. The upper surface is a light, bright green, decidedly bluish in a tone with a buffed, glossy finish. The lower surface is silvery green with a dull finish. Always remarkably fresh and lovely, it is in October that the foliage of our Magnolia becomes most conspicuously beautiful by steadfastly remaining the same color. In its natural setting its bright, light, silvery

green is then contrasted with the crimson and gold of other deciduous trees and shrubs and with the matt dark green of pine and cedar.

The bark of the older parts of Magnolia trees is smooth and silvery gray in color, but that of the younger growth is bright green. This coloring of the stout, vigorous stems makes the plant very ornamental even after the leaves have fallen. In sheltered places some of the most vigorous young shoots retain their leaves 'till spring.

Magnolia glauca is a shrubby tree reaching in New Jersey a maximum height of twenty to thirty feet. All parts of the plant—root, bark, or leaves—when cut or bruised emit a pleasant aromatic fragrance.

It is frequently spoken of as the Swamp Magnolia, and is most often found wild in comparatively moist situations. It thrives well, however, with no more moisture than is found in the average garden.

Collected plants are offered by some few dealers, but unless they have had skilled nursery care for several years, such plants are apt to have unsatisfactory root systems or bark so bruised in the process of collecting that the future life of the plant is doubtful.

The plants we offer were started from seed in our nursery and the roots as well as all other parts of the plant are in perfect condition.

Plants 9 to 12 inches high with amazingly large and vigorous root systems are offered.

\$1.00 each delivered :: \$9.00 per ten delivered

We Will Gladly

send this announcement to your friends if you care to write
their names and addresses below



FRANKLINIA

(*Franklinia alatamaha, Gordonia alatamaha*)

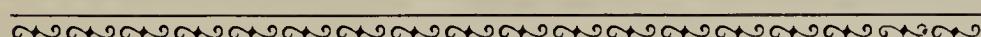
THE EXQUISITE FALL-FLOWERING TREE

AN exquisite tree indeed! It is most beautiful in its general landscape effect, with the first flowers opening in mid-August. The trees, even when very small, are abundantly starred with them until Jack Frost nips hard.

Every detail is of wondrous charm. Smooth, dark gray bark, with broken, wavering, light gray, longitudinal markings, covers a slender trunk and graceful branches so muscular and sinewy in appearance that one almost expects motion, as under a greyhound's satin skin.

The young leaves unfold a charming, delicate, bronzy red. At maturity they are 5 to 6 inches long by $1\frac{1}{2}$ to 2 inches wide, a rich dark green with red veining. In autumn the whole tree blazes with rich, warm color.

The flower buds are balls covered with whitish



green satin. When as large as marbles they unfold. The guard petal retains its firm, spherical form, and from its shelter four other petals emerge. They are satiny snowy white, elaborately frilled and pleated. The snowy, frilly chalice, 3 inches in diameter and of piquant irregularity, holds a sumptuous mass of the richest orange-gold stamens and breathes forth a delicate, balmy fragrance.

This lovely tree was found in Georgia in the latter part of the eighteenth century, but in spite of diligent search has not been found growing wild since 1790. Bailey's Cyclopedie of Horticulture says of it: "Shrub or tree to 30 feet. It does well in Massachusetts in sheltered position or with slight protection and blooms freely every year. A large tree in the Bartram Garden, near Philadelphia, was long supposed to be the only living specimen. All other specimens in cultivation are believed to have been propagated from the Bartram tree which has lately died."

So desirable a tree, known for more than a century and a quarter, would have been more widely distributed except for difficulties of propagation. Some years ago, Dr. Frederick V. Coville, of the United States Department of Agriculture, successfully propagated it from cuttings in the same soil he was using for blueberries. From him the original plants of the Whitesbog stock were obtained.

The Franklinia, like blueberries, appreciates peaty material in its soil and good drainage with assurance against drought, but it is much more tolerant of ordinary garden conditions than are the blueberries. It is a good associate for rhododendrons and azaleas. Add Franklinia to a group of dogwood and double your enjoyment of that planting.

The plants we offer are very strong and vigorous, and the larger ones bloomed in the nursery last fall.

Plants 12 to 15 inches high, \$3 each, delivered
Plants 18 to 24 inches high, \$5 each }
Plants 2½ to 3 feet high, \$10 each } Transportation
Plants 3½ to 4 feet high, \$15 each } Collect

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Pine Barren Gentian

(*Gentiana Porphyrio*)

The Pine Barren Gentian is one of the most slender and dainty, withal wiry and vigorous, little ladies that ever gladdened the eyes of a wild flower lover.

The writer vividly remembers the first time her eyes were so charmed. The cranberry bogs had been flooded to protect them from frost. While they were drying off next day harvesting operations were suspended; so father and daughter were at liberty to visit a neighbor's bog. In an old buggy, behind a plump brown horse, they drove along the winding pine road. The white sand showed only in narrow, parallel, meandering strips, for small trees and bushes just beginning to show touches of crimson and gold with their greens pressed close to the wheels and even made two gay runners between the path made by horses' hoofs and the wheel tracks.

Suddenly a glint of blue was seen. The old horse stopped and the blue beauty was gathered. A Pine Barren Gentian, two inches across with five firm, smooth-edged petals spread flat to welcome the sun and joined at the base in a wide throated bell. The upper edge of the bell between the petals was daintily fringed in a manner reminiscent of its cousin, the Fringed Gentian. Each petal near its base bore a triangle of minute, scattered, green dots and the throat was daintily marked with blue and white stripes. The stem, about twelve inches high, was flexible and wiry with narrow, grass-like leaves set alternately in pairs; and this was the whole of the plant. The flower was of amazing size for so slender a base.

Some years later Dr. Coville, having been told of this rare, shy denizen of the Jersey Pines, asked for some plants. The date of flowering had been forgotten, but it certainly bloomed in the frosty fall. A diligent search was rewarded by no lovely blue flowers, the season being too far advanced for that, but was finally crowned by finding one slender stem with two capsules still nearly full of seed. These were sent to Dr. Coville and in Washington, in the greenhouse devoted chiefly to blueberry seedlings, he reared a thrifty group of Pine Barren Gentians. A number of these plants were returned to Whitesbog and the seed they produced grew into our present stock of Gentians.

The Pine Barren Gentian is a perennial and

the original plants sent from Washington for many years developed ten to fifteen stems every season, each with from two to four flowers. Most of the bloom comes early in September, but occasional flowers open well into October.

The flowers vary somewhat in the shade of blue and a small percentage have four petals instead of five. The buds are slender, pointed, and neatly rolled in spiral form like the bud of a morning glory. When the flower is fully expanded the petals have a slight side-wise twist still suggesting the spiral. The flowers open several days in succession and each evening close neatly. The faded flowers are so accurately spiraled that they appear like buds to those not very familiar with the plant. As the seeds ripen the ovary stalk elongates and pushes the upper end of the capsule above the sheathing faded flower. The capsule splits at the tip and the myriads of tiny, slender seeds with which it is packed, are scattered by the swaying of the slender stalk in the wind.

The roots are large and fleshy, very little branched, nearly a foot long and grow straight down. When one attempts to dig a wild plant all tangled up with other roots it seems as if they must go all the way to China.

In the writer's garden many of these Gentians are growing in friendly company with winter-green or tea-berry (*Gaultheria procumbens*), as we like to call it in this part of Jersey. The Pine Barren Gentian is a rarely beautiful subject for the rock garden and, so far as the writer knows, has been grown by only a few people who visited Whitesbog and fell in love with it there.

Mrs. Edmond Sterling, who has a few plants in a backyard garden, in West Philadelphia, where she succeeds with blueberries and other acid soil plants, writes, "Each had one dainty, wonderful flower. We both made many visits to the blooming plants and greatly appreciated their extreme daintiness of coloring, especially the triangle of tiny, green dots at the base of each petal."

Miss Mary Wright says that she had no difficulty in having these Gentians bloom at the edge of a bit of wood in a Philadelphia suburb.

They are acid soil plants and should be given peat moss and sand, dug in deep to accommodate their amazingly long roots. They may be shipped now or in the spring as desired.

\$1.00 per three delivered

:: \$3.00 per ten delivered